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| Application Number | 09/954,495 |
| Filing Date | 09/10/2001 |
| First Named Inventor | Bruce WOODLEY |
| Group Art Unit | 2828 |
| Examiner Name | Leung |
| Total Number of Pages in This Submission | 5 plus 68 refs |
| | Attorney Docket Number |
| | 215248.00004 |

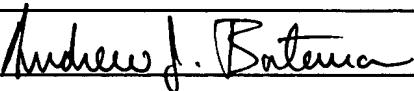
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REMARKS

COMMUNICATION with PTO-1449s (3 sheets) and copies of 68 cited references

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

| | |
|-------------------------|--|
| Firm or Individual name | Andrew J. Bateman Registration No.: 45,573 |
| Signature |  |
| Date | 08/03/2004 |

CERTIFICATE OF MAILING

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Application No. 09/954,495
Attorney's Docket No. 215248.00004
Page 1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of:)
Bruce R. WOODLEY, et al.) Group Art Unit: 2828
Application No.: 09/954,495) Examiner: Quyen Phan Leung
Filed: September 10, 2001) Date: August 3, 2004
For: WAVELENGTH AGILE LASER)

COMMUNICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

As requested by the Examiner in the *In re Quayle* Action mailed June 3, 2004, Applicants provide herewith courtesy Form PTO-1449s and copies of all non-US patent documents cited by Applicants in Information Disclosure Statements respectively filed on September 10, 2001 and March 25, 2002.

The Examiner acknowledges receipt by the USPTO of the original document copies filed concurrently with the Information Disclosure Statements, but indicates that the reference copies cannot be located at the USPTO.

It is respectfully requested that the information listed on the PTO-1449s be considered by the Examiner, and that initialed copies of the PTO-1449s be returned to Applicants indicating that such information was considered.

Should the Examiner have any questions regarding this communication or the application in general, the Examiner is urged to contact the Applicants' attorney, Andrew J. Bateman, by telephone at (202) 625-3547. The correspondence address of record remains as provided below.

Respectfully submitted,

KATTEN MUCHIN ZAVIS ROSENMAN

By:


Andrew J. Bateman
Registration No. 45,573

Patent Administrator
KATTEN MUCHIN ZAVIS ROSENMAN
525 West Monroe Street
Suite 1600
Chicago, Illinois 60661-3693
Facsimile: (312) 902-1061



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USPTO 1449 MODIFIED
U.S. PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO. 215248.00004 APPLICATION NO. 09/954,495

APPLICANT

Bruce R. WOODLEY, et al.

FILING DATE

GROUP

09/10/2001

2828

OTHER DOCUMENTS (Including author, title, date, pertinent pages, etc.)

| *EXAMINER INITIALS | |
|--------------------|--|
| | 1 Alferness, R.C., "Efficient waveguide electro-optic TE \leftrightarrow TM mode converter/wavelength filter", APPLIED PHYSICS LETTERS, Vol. 36, No. 7, April 1980, pp. 513-515 |
| | 2 Kim, et al., "Switching Operations of Three-Waveguide Optical Switches", IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS, Vol. 6, No. 1, pp. 170-174, Jan/Feb 2000 |
| | 3 Haus, et al., "Three-Waveguide Couplers for Improved Sampling and Filtering", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-17, No. 12, pp. 2321-2325, Dec. 1981 |
| | 4 Marom, et al., "Relation Between Normal-Mode and Coupled-Mode Analyses of Parallel Waveguides", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-20, No. 12, pp. 1311-1318 |
| | 5 Alferness, et al., "Tunable optical waveguide directional coupler filter", APPLIED PHYSICS LETTERS, Vol. 33, No. 2, pp. 161-163, July 1978 |
| | 6 Kogelnik, et al., "Switched Directional Couplers with Alternating $\Delta\beta$ ", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-12, No. 7, pp. 396-401, July 1976 |
| | 7 Wacogne, et al., "Single lithium niobate crystal for mode selection and phase modulation in a tunable extended - cavity diode laser" OPTICS LETTERS, Vol. 19, No. 17, pp. 1334-1336, September 1994 |
| | 8 Mackinnon, et al., "Laser-diode-pumped, electro-optically tunable Nd:MgO:LiNbO ₃ Microchip Laser", JOURNAL OF THE OPTICAL SOCIETY OF AMERICA B, Vol. 11, No. 3, pp. 519-522, March 1994 |
| | 9 Irace, et al., "Fast Silicon-on-Silicon Optoelectronic Router Based on a BMFET Device", IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS, Vol. 6, No. 1, pp. 14-17, Jan/Feb 2000 |
| | 10 Kasunic, K., "Design Equations for the Reflectivity of Deep-Etch Distributed Bragg Reflector Gratings", JOURNAL OF LIGHTWAVE TECHNOLOGY, Vol. 18, No. 3, pp. 425-429, March 2000 |
| | 11 Alferness, et al., "Characteristics of Ti-diffused lithium niobate optical directional couplers", APPLIED OPTICS, Vol. 18, No. 23, pp. 4012-4016, December 1979 |
| | 12 Nelson, et al., "Coupling optical waveguides by tapers", APPLIED OPTICS, Vol. 14, No. 12, pp. 3012-3015, December 1975 |
| | 13 Kaminow, et al., "Loss in cleaved Ti-diffused LiNbO ₃ waveguides", APPLIED PHYSICS LETTERS, Vol. 33, No. 1, pp. 62-64, July 1978 |
| | 14 Payne et al., "Design of Lithium Niobate Based Photonic Switching Systems", IEEE COMMUNICATIONS MAGAZINE, Vol. 25, No. 5, pp. 37-41, May 1987 |
| | 15 Ohmachi, et al., "Electro-optic light modulator with branched ridge waveguide", APPLIED PHYSICS LETTERS, Vol. 27, No. 10, pp. 544-546, November 1975 |
| | 16 Burns, et al., "Active branching waveguide modular", APPLIED PHYSICS LETTERS, Vol. 29, No. 12, pp. 790-792, December 1976 |
| | 17 Burns, et al., "Optical waveguide parabolic coupling horns", APPLIED PHYSICS LETTERS, Vol. 30, No. 1, pp. 28-30, January 1977 |
| | 18 Favre, et al., "External-Cavity Semiconductor Laser with 15nm Continuous Tuning Range", ELECTRONICS LETTERS, Vol. 22, No. 15, pp. 795-796, July 1986 |
| | 19 Schmidt, et al., "Metal-diffused optical waveguide in LiNbO ₃ ", APPLIED PHYSICS LETTERS, Vol. 25, No. 8, pp. 458-460, October 1974 |
| | 20 Tien, et al., "Light beam scanning and deflection in epitaxial LiNbO ₃ electro-optic waveguides", APPLIED PHYSICS LETTERS, Vol. 25, No. 10, pp. 563-565, November 1974 |
| | 21 Lin, et al., "A Three-Dimensional Optical Photonic Crystal", JOURNAL OF LIGHTWAVE TECHNOLOGY, Vol. 17, No. 11, pp. 1944-1947, November 1999 |
| | 22 Talneau, et al., "Agile and Fast Switching Monolithically Integrated Four Wavelength Selectable Source at 1.55 μ m", IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 11, No. 1, pp. 12-14, January 1999 |
| | 23 Locco, et al., "Bragg grating fast tunable filter", ELECTRONICS LETTERS, Vol. 33, No. 25, pp. 2147-2148, December 1997 |
| | 24 Vengsarkar, et al., "Long-Period Fiber Gratings as Band-Rejection Filters" JOURNAL OF LIGHTWAVE TECHNOLOGY, Vol. 14, No. 1, pp. 58-65, January 1996 |
| | 25 Alferness, et al., "Electro-optic waveguide TE \leftrightarrow TM mode converter with low drive voltage", OPTICS LETTERS, Vol. 5, No. 11, pp. 473-475, November 1980 |

EXAMINER

DATE CONSIDERED

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| U.S. PATENT AND TRADEMARK OFFICE | ATTORNEY DOCKET NO. | APPLICATION NO. |
| | 215248.00004 | 09/954,495 |
| LIST OF REFERENCES CITED BY APPLICANT | | APPLICANT |
| Bruce R. WOODLEY, et al. | | |
| DATE SUBMITTED TO USPTO: August 3, 2004 | FILING DATE | GROUP |
| | 09/10/2001 | 2828 |

OTHER DOCUMENTS(S) (Including author, title, date, pertinent pages, etc.)

| | |
|--------------------|--|
| *EXAMINER INITIALS | |
| 26 | Franke, et al., "All-Optical Switching in an Angled-Grating Semiconductor Bragg Amplifier", IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 11, No. 7, pp. 815-817, July 1999 |
| 27 | Wörhoff, et al., "Design, Tolerance Analysis, and Fabrication of Silicon Oxynitride Based Planar Optical Waveguides for Communication Devices", JOURNAL OF LIGHTWAVE TECHNOLOGY, Vol. 17, No. 8, pp. 1401-1407, August 1999 |
| 28 | Matos, et al., "Epitaxial Lift-off Microcavities for 1.55- μ m Quantum-Well Spatial Light Modulators", IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 11, No. 1, pp. 57-59, January 1999 |
| 29 | Ma, et al., "Realization of All-Optical Wavelength Converter Based on Directionally Coupled Semiconductor Optical Amplifiers", IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 11, No. 2, pp. 188-190, February 1999 |
| 30 | Mason, et al., "Widely Tunable Sampled Grating DBR Laser with Integrated Electroabsorption Modulator", IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 11, No. 6, pp. 638-640, June 1999 |
| 31 | Eickhoff, W., "In-Line Fibre-Optic Polariser", ELECTRONICS LETTERS, Vol. 16, No. 20, pp. 762-763, September 1980 |
| 32 | Bergh, et al., "Single-Mode Fiber-Optic Polarizer", OPTICS LETTERS, Vol. 5, No. 11, pp. 479-481, November 1980 |
| 33 | Zervas, et al., "Performance of surface-plasma-wave fiber-optic polarizers", OPTICS LETTERS, Vol. 15, No. 9, pp. 513-515, May 1990 |
| 34 | Lee, et al., "Fabrication of a side-polished fiber polarizer with a birefringent polymer overlay", OPTICS LETTERS, Vol. 22, No. 9, pp. 606-608, May 1997 |
| 35 | Wu, et al., "UV-Induced Surface-Relief Gratings on LiNbO ₃ Channel Waveguides", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. 35, No. 10, pp. 1369-1373, October 1999 |
| 36 | Schmidt, et al., "Metal-diffused optical waveguides in LiNbO ₃ ", APPLIED PHYSICS LETTERS, Vol. 25, No. 8, pp. 458-460, October 1974 |
| 37 | Jackel, et al., "Elimination of out-diffused surface guiding in titanium-diffused LiNbO ₃ ", APPLIED PHYSICS LETTERS, Vol. 38, No. 7, pp. 509-511, April 1981 |
| 38 | Alferness, et al., "Efficient Single-Mode Fiber to Titanium Diffused Lithium Niobate Waveguide Coupling for $\lambda=1.32\text{ }\mu\text{m}$ ", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-18, No. 10, pp. 1807-1813, October 1982 |
| 39 | McCaughan, et al., "Influence of Temperature and Initial Titanium Dimensions on Fiber-Ti:LiNbO ₃ Waveguide Insertion Loss at $\lambda=1.3\text{ }\mu\text{m}$ ", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-19, No. 2, pp. 131-136, |
| 40 | Minakata, et al., "Precise determination of refractive-index changes in Ti-diffused LiNbO ₃ optical waveguides", J. APPLIED PHYSICS, Vol. 49, No. 9, pp. 4677-4682, September 1978 |
| 41 | Hahn, et al., "Electron-Concentration Dependence of Absorption and Refraction in n-In _{0.53} Ga _{0.47} As Near the Band-Edge", JOURNAL OF ELECTRONIC MATERIALS, Vol. 24, No. 10, pp. 1357-1361, 1996 |
| 42 | Birks, et al., "Low Power Acousto-Optic Device Based on A Tapered Single-Mode Fiber", IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 6, No. 6, pp. 725-727, June 1994 |
| 43 | Wu, et al., "FIR Filter Design via Spectral Factorization and Convex Optimization", 33 pages |
| 44 | Oppenheim, et al., "Filter Design Techniques", DISCRETE-TIME SIGNAL PROCESSING, Prentice Hall, Englewood Cliffs, New Jersey, pp. 444-480, 1989 |
| 45 | Leuthold, et al., "Multimode Interference Couplers for the Conversion and Combining of Zero-and First-Order Modes", JOURNAL OF LIGHTWAVE TECHNOLOGY, Vol. 16, No. 7, pp. 1228-1239, July 1998 |
| 46 | "Oversampling Techniques using the TMS320C24x Family", Literature No. SPRA461, TEXAS INSTRUMENTS EUROPE, 37 pages, June 1998 |
| 47 | Okamoto, Katsunari, "Fundamentals of Optical Waveguides", OPTICS AND PHOTONICS, Academic Press, pp. 59-71, 2000 |
| 48 | Alferness, R., "Electrooptic guided-wave device for general polarization transformations", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-17, No. 6, pp. 965-969, June 1981 |
| 49 | Alferness, R. et al, "Waveguide electro-optic polarization transformer", APPLIED PHYSICS LETTERS, Vol. 38, No. 9, pp. 655-657, May 1981 |

EXAMINER

DATE CONSIDERED

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OTHER DOCUMENTS(S) (Including author, title, date, pertinent pages, etc.)

| *EXAMINER INITIALS | |
|--------------------|---|
| 50 | Burns, W., et al., "End fire coupling between optical fibers and diffused channel waveguides," APPLIED OPTICS, Vol. 16, No. 8, pp. 2048-2050, August 1997 |
| 51 | Burns, W. et al., "Mode Conversion in Planar-Dielectric Separating Waveguides", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-11, No. 1, pp. 32-39, January 1975 |
| 52 | Heismann, F., et al., "Narrow-linewidth, electro-optically tunable InGaAsP-Ti:LiNbO ₃ extended cavity laser", APPLIED PHYSICS LETTERS, Vol. 51, No. 1, pp. 164-166, July 1987 |
| 53 | Heismann, F., et al., "Electro-Optically Tunable, Narrowband Ti : LiNbO ₃ Wavelength Filter", ELECTRONICS LETTERS, Vol. 23, No. 11, pp. 572-574, May 1987 |
| 54 | Heismann, F., et al., "Wavelength-Tunable Electrooptic Polarization Conversion in Birefringent Waveguides", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-24, No. 1, pp. 83-93, January 1988 |
| 55 | Holzman, J., et al., "Ultrafast All-Optical Modulation of Infrared Radiation Via Metal-Semiconductor Waveguide Structures", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. 35, No. 4, pp. 583-589, April 1999 |
| 56 | Jayaraman, V., et al., "Theory, Design, and Performance of Extended Tuning Range Semiconductor Lasers with Sampled Gratings", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. 29, No. 6, pp. 1824-1834, June 1993 |
| 57 | Korotky, S., et al., "Mode Size and Method for Estimating the Propagation Constant of Single-Mode Ti:LiNbO ₃ Strip Waveguides", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-18, No. 10, pp. 1796-1801, October 1982 |
| 58 | Minford, W., et al., "Low-Loss Ti:LiNbO ₃ Waveguide Bends at $\lambda=1.3 \mu\text{m}$ ", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-18, No. 10, pp. 1802-1806, October 1982 |
| 59 | Noda, J., et al., "Single-mode optical-wavelength fiber coupler", APPLIED OPTICS, Vol. 17, No. 13, pp. 2092-2096, July 1978 |
| 60 | Liu, B., et al., "Fused InP-GaAs Vertical Coupler Filters", IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 11, No. 1, pp. 93-95, January 1999 |
| 61 | Liu, P., "LiNbO ₃ Waveguide Modulator with 1.2 μm Thick Electrodes Fabricated by Lift-Off Technique", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-18, No. 10, pp. 1780-1782, October 1982 |
| 62 | Marcatili, E., "Dielectric Rectangular Waveguide and Directional Coupler for Integrated Optics", THE BELL SYSTEM TECHNICAL JOURNAL, pp. 2071-2102, September 1969 |
| 63 | Ranganath, T., et al., "Ti-Diffused LiNbO ₃ Branched-Waveguide modulators: Performance and Design", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-13, No. 4, pp. 290-295, April 1977 |
| 64 | Saitoh, T., et al., "Theoretical Analysis and Fabrication of Antireflection Coatings on Laser-Diode Facets", JOURNAL OF LIGHTWAVE TECHNOLOGY, Vol. LT-3, No. 2, pp. 288-293, April 1985 |
| 65 | Sasaki, H., et al., "Electro-Optic Y-Junction Modulator/Switch", ELECTRONICS LETTERS Vol. 12, No. 18, pp. 459-460, September 1976 |
| 66 | Schmidt, R., et al., "Electro-optically switched coupler with stepped $\Delta\beta$ reversal using Ti-diffused LiNbO ₃ waveguides", APPLIED PHYSICS LETTERS, Vol. 28, No. 9, pp. 503-506, May 1976 |
| 67 | Soref, R., et al., "Electrooptical Effects in Silicon", IEEE JOURNAL OF QUANTUM ELECTRONICS, Vol. QE-23, No. 1, pp. 123-129, January 1987 |
| 68 | Taylor, H., "Frequency-Selective Coupling in Parallel Dielectric Waveguides", OPTICS COMMUNICATIONS, Vol. 8, No. 4, pp. 421-425, August 1973 |

| EXAMINER | DATE CONSIDERED |
|----------|-----------------|
| | |

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